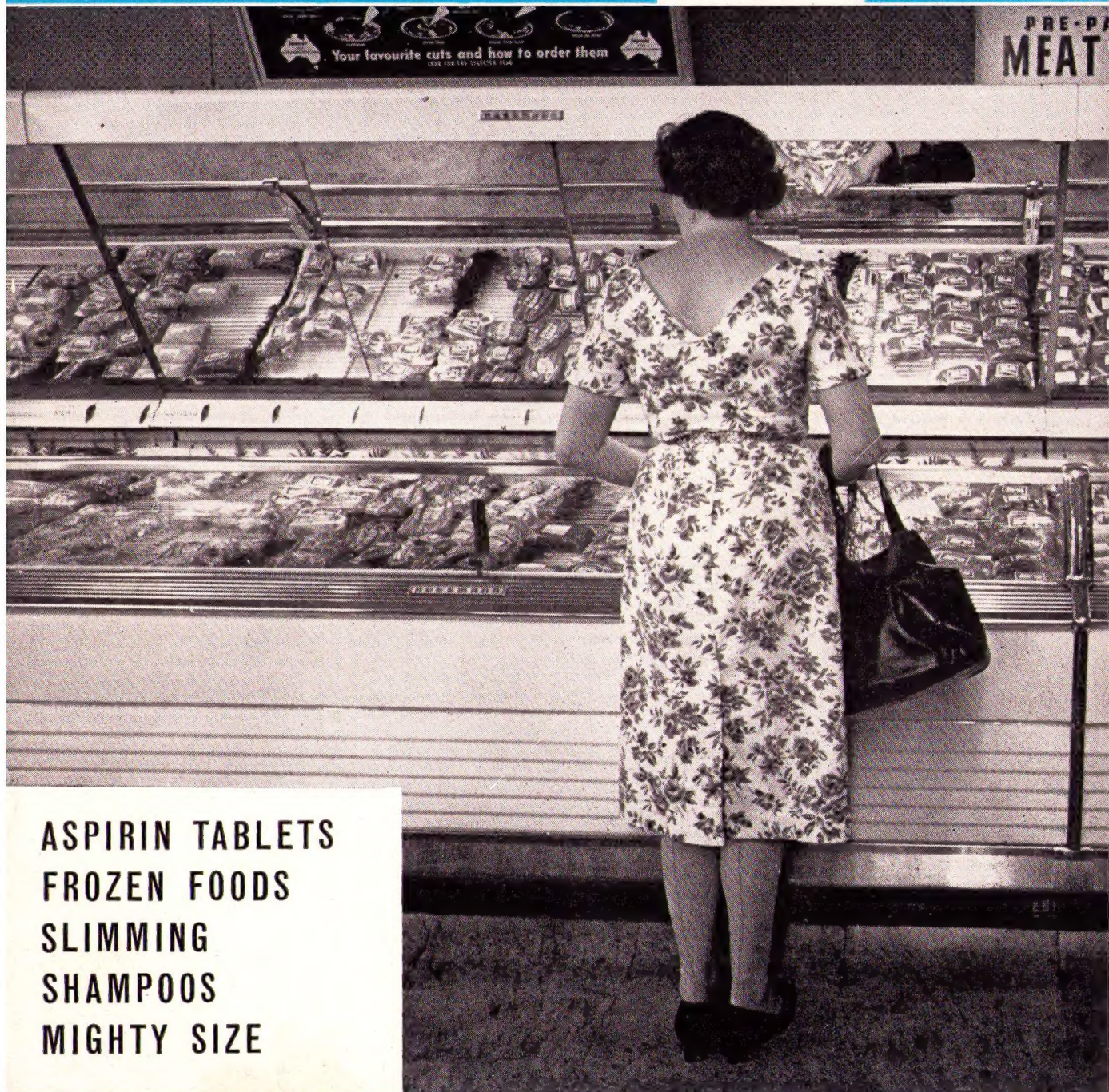


CHOICE

APRIL
1
1960



ASPIRIN TABLETS
FROZEN FOODS
SLIMMING
SHAMPOOS
MIGHTY SIZE

GENERAL NOTICES

Choice is the publication of the Australasian Consumers' Association Limited and is available only to members of the Association.

The Australasian Consumers' Association wishes to state that wherever there is reference in this magazine to tests or comments on any article or articles these references relate only to the article or articles examined by the Association and *not* to any other article of the same or similar description.

The prices given for the goods described in *Choice* are the prices paid by ACA for the goods at the time of purchase. The prices of goods of such description may vary from place to place in Australia and from time to time.

MEMBERSHIP

There are two kinds of membership :

1. ORDINARY MEMBERS, who are entitled to receive copies of the publications of the Association and also to attend and vote at General Meetings.

Such members must not be engaged in the manufacture or sale of goods or services of the kind which the Association will examine, and hence persons who wish to become Ordinary Members are required to submit an application for approval of the Council. The number of Ordinary Members is limited, and it is considered that these should be prepared to take an active interest in ACA in the various States.

The Annual Subscription for Ordinary Members is £2.

2. ASSOCIATE MEMBERS (the usual form of membership).

Anyone may become an Associate Member on payment of an Annual Subscription of £1, which entitles the member to the magazine and other publications of the Association but not the right to attend or vote at General Meetings.

INTERNATIONAL CONFERENCE OF CONSUMERS' ASSOCIATIONS

An International Conference of Consumers' Associations is to be held at the Hague, Holland on the last day of March and April 1st. ACA is very pleased to say that it will be represented on this occasion.

Dr. H. Epstein, a very active member of our Council, will be in Europe at the time and has arranged to attend the Conference on our behalf.

Australasian Consumers' Association Ltd.

(Incorporated in New South Wales)

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ACA

The Australasian Consumers' Association—ACA for short—is, as its name suggests, your association. We all buy goods and ACA has one single purpose—to enable us to get the maximum value for our money.

ACA was started at the end of last year by a group of men and women in Sydney who had seen the success of similar associations in Great Britain and the U.S.A. and felt sure that such success would also follow in Australia. Among these people were scientists, lawyers, artists and housewives, and all of these have collaborated to produce this first issue of *Choice*. No money has been spent on salaries, and all the testing, writing, photography, editorial and art work has been done by these same people out of interest and keenness alone.

In Britain the Consumers' Association built up its membership to 160,000 in rather less than two years, and this Association has been very helpful to ACA in this early stage of our development. On the advice from Great Britain

we set as our first object the production of an issue of the journal rather than first conducting a membership drive. Most people want to see what they will get for their subscription, and here is the first sample.

In this issue there are two articles, "Shampoos" and "Slimming", which were selected by your Council for reproduction from the English journal *Which?*. The articles on aspirins, package sizes and frozen foods are entirely new and written especially for *Choice*. Our aim at first is to include at least two articles based on our own work and to select one or two from overseas until we grow sufficiently to fend entirely for ourselves.

At the time of going to press we have less than 500 members, and we could not incur the expense of buying refrigerators, toasters or washing machines, and this, of course, is why we have kept to the cheaper products like aspirins, breakfast foods and soap. When we have put this issue into your hands we have already plans for

further projects, so that every member—each one of us—should make an effort now to enrol at least six others. Our success depends on **your** support. If we had a member in each family in Australia we should have about 3,000,000 members. We should have an income of about £3,000,000 and we should be the most powerful force in consumer research in the world. We do not expect this, of course, but we do need to get as many members as possible if we are to make ACA a real success.

A few words now about the subscription. ACA is non-profit making. At present we have no paid staff, and even the posting of this magazine to you was done by members of the Council personally. Obviously this is a temporary situation for we shall have to have an office, staff, editors, technicians, etc., etc., and we know that the subscription at £1 is going to make a very tight budget. You have to pay for *Choice* entirely—no advertiser is allowed to do so! We are happy, on the other hand, that we can carry out our programme for a subscription of £1 per year **if we have enough members.**

How ACA works

ACA buys goods from retail shops just like any other consumer. It does not buy wholesale or accept manufacturers' samples, and ACA has no connection with any manufacturer or distributor providing consumer goods or services.

The goods are submitted to a panel of experts, who arrange for the necessary testing to be carried out. As with Consumer Associations overseas, this will largely be done on a contract basis by suitable laboratories under the direction of ACA's expert panel. The aim is to set up ultimately testing facilities within the Association itself, but, even so, many specialized tests would still have to be done elsewhere.

When tests are completed, the results are submitted to the Council of ACA, which approves a suitable account for publication in *Choice*.

Joining ACA

Anyone can join ACA and become an Associate Member for £1 per year, and in this issue you will find three lift-out forms for you to give to your friends.

Can you help ACA in any other way?

Yes! After joining we want you to write and tell us what sort of products you would like

ACA to examine. We also appreciate letters suitable for publication in *Choice*.

Incidentally, if you write to us for publication you must include your name and address, although we will not publish this if you so request. We have already received anonymous letters containing quite good ideas, but we can do nothing with these letters except to discard them.

This Association is a private Association of members who have the common aim of improving the quality and value of goods they buy. Our journal will not be sold on bookstalls and will only be available to members. Any letters you send to the Association will be used only within it and there can be no criticism or "come-back" on you for sending them.

How else can you help ACA?

There is one other simple thing you can do if you feel so inclined, and that is to help us with the postage. In Australia postage is a big item and a costly one to an Association like ours. The less we spend of your subscription on postage the more value we shall be able to give you.

Enclosed in this issue there are two envelopes, one addressed to our office and one for you to address back to yourself. When you write to us, stamping and addressing your own envelope, you will save us a few minutes and a few pence when we reply to you. Again, if you get your friends to join, please tell them that we shall enclose their receipt when we send their copy of *Choice*.

Membership date

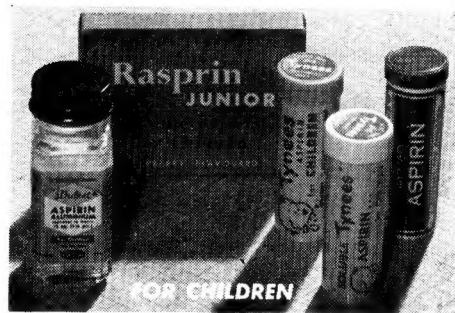
All members who have joined to date will receive all issues of *Choice* up to the end of 1960, when all annual membership expires. If you join later in the year you will receive back issues of *Choice* by return mail.

Members who joined last year are credited with membership for 1960, but we do thank them for their confidence, because it is their subscriptions which have made this issue possible.

ACA says "Thank you".

To Mrs. Chas. Hawtree, Miss Delles Low and Miss Barbara Steele, who have helped us tremendously by typing all letters and manuscripts for the journal, and for ACA generally, we extend our wholehearted thanks.

ASPIRIN



What it is and what it does

Aspirin, acetyl salicylic acid, is probably the most widely used of all drugs, and it is certainly one of the most valuable.

The scientist classes aspirin as an antipyretic and analgesic. This means quite simply that it is capable of lowering the temperature in fever and secondly that it relieves pain.

Pain falls roughly into two classes—the first and most common includes pains like headaches, neuralgia, toothache and rheumatic pains, and often this sort of pain is associated with some local inflammation of the tissues. It is pain of this type which aspirin can relieve. The second type of pain is due to injury and includes serious pain incurred in accidents or after operations or perhaps with malignant disease. Aspirin is useless against pain of this type where the doctor usually has to give morphia or some other powerful drug of this kind.

Aspirin is a very safe drug and is not habit forming, but it must be borne in mind that pain is one of Nature's danger signals and unless the cause is obvious and simple then a doctor should be consulted.

Aspirin does not cause sleep, but since a toothache or headache can result in sleeplessness, the removal of the pain will often allow sleep to follow.

The dose of aspirin which is usually effective is 10 grains (two tablets), and the effect should be felt within about thirty minutes and will last about three to four hours. Nothing is to be gained by taking more than three tablets at the most or by taking them more often than four-hourly.

Children can take aspirin, too, and it is very useful in teething and minor pains, but it should not be given to children under three except on a doctor's advice, because any pain in a young child should cause you to consult one.

It is very rare for people to suffer any ill effects from aspirin, but occasionally some people are allergic to it. The people may experience nettle-rash or asthma after even small doses of aspirin, and in their case this drug must be avoided and they should ask a doctor to suggest an alternative which they might use.

There is one disadvantage about aspirin and that is its liability to irritate the stomach, particularly if it is taken on an empty stomach.

You should therefore take aspirins after a meal or certainly with a glass of water. The so-called "soluble aspirin tablets" are an attempt to get over this by putting the drug in an effervescent tablet with a little chalk, so that when it is put into a glass of water it breaks up rapidly and makes a less acid mixture to drink.

To sum up then, take aspirin, or A.P.C. mixtures of which aspirin is the principal constituent responsible for their effect, when you know what your pain is due to, and if the pain still gets worse or continues longer than you would expect consult a doctor to find the underlying cause.

Aspirin Tablets and how to buy them

All aspirin is the same by whatever name the manufacturer calls it, and it is a substance for which standards are laid down in the British Pharmacopoeia.

The British Pharmacopoeia is a book which has legal status in Australia and enumerates tests with which aspirin itself and tablets of aspirin must comply. It is logical, therefore, that ACA, representing the consumer, should require these products to pass these tests.

The Tests

Simply the tests which are required by the Pharmacopoeia comprise the following:

1. Uniformity of weight

Twenty tablets are weighed singly and the average weight is calculated. Not more than two tablets deviate from this average by $\pm 5\%$ and no tablets by more than $\pm 10\%$.

2. Amount of aspirin per tablet

In order to make aspirin tablets, other substances, such as a little starch, have to be included, but the main constituent is, of course,

acetyl salicylic acid, or aspirin. The Pharmacopoeia requires that this shall be within $\pm 5\%$ of the stated amount, so that a 5-grain tablet should contain not less than 4.75 grains and not more than 5.25 grains of aspirin.

3. Free salicylic acid

If aspirin deteriorates it breaks up and a quantity of salicylic acid is formed. Apart from a smaller quantity of aspirin being left, there is some evidence that this may cause more gastric irritation, and hence the Pharmacopoeia sets a limit for the amount of salicylic acid permitted. This is a limit test and the amount of salicylic acid is not actually measured, but must be less than 0.15% of the amount of aspirin stated to be in the tablet, and the test is designed to show whether the amount is more or less than this figure.

4. Disintegration time

Obviously aspirin tablets must break up in the stomach in order to be effective, and the sooner this takes place the better. The manufacturer has the problem of making a tablet which is durable enough to be carried about in a bottle in one's pocket and yet breaks up readily when swallowed. The requirement here is disintegration within 15 minutes under the very carefully controlled conditions of the test.

ACA's Tests

ACA bought fourteen different brands and types of aspirin tablets from a pharmacist's shop in Kogarah and a sample of Woolworth's aspirin in Lithgow and submitted these for analysis according to the Pharmacopoeia.

In Table I is shown the results reported for five samples of aspirin tablets, all of which satisfied the requirements for weight and aspirin content. The Woolworth's tablets were found

Table I: Ordinary Aspirin Tablets

Make	Quantity	Price	Tablet Weight		Aspirin Content		Free Salicylic Acid	Disintegration Time
			Average Grains	Deviation per cent.	Grains per tab.	Deviation per cent.		
Aspirin, 5 gr. Woolworths Ltd.	70	1/11	5.52	+6.24 P -4.97	4.85	-3.0 P	Excess of B.P. Limits F	41 secs.
Aspirin, 5 gr. Parke, Davis & Co. Ltd.	25	2/-	5.55	+1.34 P -1.43	4.94	-1.1 P	Pass B.P. Limits P	28 secs.
Empirin, 5 gr. Burroughs Wellcome & Co. Ltd.	25	2/3	5.56	+3.29 P -4.02	5.02	+0.4 P	Pass B.P. Limits P	73 secs.
Aspro, 5 gr. Nicholas Pty. Ltd.	25	1/9	5.96	+3.23 P -2.46	4.87	-2.6 P	Pass B.P. Limits P	23 secs.
Bayer's, 5 gr. Bayer Pharma Pty. Ltd.	24	1/9	6.34	+2.04 P -1.56	5.02	+0.4 P	Pass B.P. Limits P	46 secs.

P = Passes F = Fails the test

to be broken to some extent in the plastic container, and in one sample 65 were whole and in another 66 out of 70. The Woolworth's sample also failed on account of an excess of salicylic acid. All were very good on the disintegration test and the slowest took less than $1\frac{1}{4}$ minutes.

The prices of these is very uniform with the exception of Woolworth's, and as that make did not comply with our requirements it is largely a matter of personal opinion which one should buy. The most economical buy is Nicholas's Aspro at 25 for 1/9.

Table II: Soluble Aspirin Tablets

Make	Quantity	Price	Tablet Weight		Aspirin Content		Free Salicylic Acid	Disintegration Time
			Average Grains	Deviation per cent.	Grains per tab.	Deviation per cent.		
Regasprin Boots Pure Drug Co.	30	3/9	10.0	+1.79 P -2.38	5.20	+4.0 P	Pass B.P. Limits P	50 secs.
Disprin Reckitt & Colman Ltd.	24	3/3	10.02	+2.51 P -3.25	5.03	-0.5 P	Pass B.P. Limits P	72 secs.
Calasprin McGloin Pty. Ltd.	24	3/-	10.52	+4.25 P -2.99	4.75	-5.0 P	Pass B.P. Limits P	28 secs.
Soldral Burroughs Wellcome & Co. Ltd.	24	3/3	8.26	+4.18 P -2.28	4.98	-0.4 P	Pass B.P. Limits P	33 secs.
Blandsprin Bland Ethicals Pty. Ltd.	20	3/6	11.30	+2.51 P -2.09	4.47	-10.6 F	Excess of B.P. Limits F	1 min. 44 sec.

P = Passes F = Fails the test

Soluble Aspirins

In Table II the results of the tests on soluble aspirin tablets are given. All of them again passed the tests of weight, but the "Blandsprin" failed on aspirin content and the amount of salicylic acid was above the B.P. limit. This was also the dearest preparation, but claimed to have added vitamins for which there would

seem to be no advantage, since the claim on the label is for use in headache and similar pains. In ACA's sample the label had been altered to 20 tablets with a ball-point pen or a similar device from some previous figure, and certainly there were only 20 in the pack. The best buy in value for money is Boots' "Regasprin" at 30 for 3/9 or McGloin's "Calasprin" at 24 for 3/-, which is, of course, the same price.

Table III: Children's Aspirin Tablets

Make	Quantity	Price	Tablet Weight		Aspirin Content		Free Salicylic Acid	Disintegration Time
			Average Grains	Deviation per cent.	Grains per tab.	Deviation per cent.		
Rasprin Junior, $1\frac{1}{4}$ gr. Kingsgrove Laboratories Pty. Ltd.	18	2/6	4.29	+2.01 P -2.99	1.28	+2.8 P	Pass B.P. Limits P	17 secs.
Tynees, $1\frac{1}{4}$ gr. World Agencies Pty. Ltd.	36	2/6	3.55	+3.83 P -7.10	1.29	+3.1 P	Pass B.P. Limits P	33 secs.
Tynees Soluble, $1\frac{1}{4}$ gr. World Agencies Pty. Ltd.	30	2/6	4.37	+1.73 P -2.62	1.15	-7.9 F	Excess of B.P. Limits F	23 secs.
Infatabs, 1 gr. Parke, Davis & Co. Ltd.	20	1/9	8.15	+3.32 P -4.12	1.01	+1.1 P	Pass B.P. Limits P	14 mins. 12 secs.
Dulcet, $1\frac{1}{4}$ gr. Abbott Laboratories Pty. Ltd.	50	5/-	6.78	+2.86 P -2.75	1.27	+1.8 P	Pass B.P. Limits P	16 secs.

P = Passes F = Fails the test

Children's Aspirins

These are flavoured aspirin tablets which usually contain $1\frac{1}{4}$ grains of aspirin per tablet—one-quarter that in the full size—and they are particularly designed to be attractive to Junior. As the largest pack contained 50 tablets, which is equivalent to $12\frac{1}{2}$ adult's tablets, care should be taken that children do not get access to the bottle and eat them all. It is unlikely that any of these packs contain a dangerous dose, but

they are deliberately designed to be attractive to children, and this should be borne in mind. One of these samples, Tynees' Soluble Aspirin, failed owing to low aspirin content and excess of salicylic acid.

The best value for money in this case is "Tynees" at 36 for 2/6, but they are all expensive by the standards of the full-size tablets, and a quarter of an adult's tablet is quite a satisfactory way to give this dose.

General Conclusions

Most of the aspirin tablets ACA tested were excellent and conformed to the requirements of the British Pharmacopoeia. It is significant that those which did not were not well-known brands, and therefore it is well to buy those of prominent manufacturers. It may well be argued that the tests we employed are very stringent, and unnecessarily so for a simple and harmless drug like aspirin. Our answer must be that these standards are laid down for British

pharmaceutical products and are well adhered to by the leading manufacturers. They do not, therefore, present major manufacturing difficulties and should be attained by all.

It is worth nothing that though these tablets might pass all tests when fresh, if the package is opened and the contents allowed to take up moisture, deterioration can set in, and for this reason ACA commends those products which are individually sealed in waxed paper or metallic foil. Aspro is an example of good pack in this regard.

Readers' Letters

Dear Mrs. Sheahan,

Thank you for your note in which you mention your organisation intends to have a page of "Readers' Letters". I wonder, though, whether this shouldn't be reserved for comments on matters which have appeared in your journal (whether bouquets or brickbats) and have a separate "Mugs' Corner" for those who can't resist gadgets, etc. But I suppose you'll have to see what happens first. Here, then, are some of my less-fortunate purchases:

1. "Egg Separator"

A very cheap gadget (about 1/- or 1/6, if I remember correctly) of coloured plastic, shaped like a sawn-off cup with a slit at the bottom of it. One side of the slit was slightly raised. The idea was to break the egg into this, rotate the cup quickly, whereupon the egg-white would slither through the slit and the yolk remain. Alas, however quickly and at however an angle I rotated, both yolk and white disappeared together, quick as a flash, down through the slit. I was careful to experiment first on eggs I wanted to scramble anyway, but hate to think what would have happened to anyone going ahead on the recipe: "Take a dozen eggs, separate the whites and whip them until stiff . . ." (I would have sent it to you, but threw it away in disgust at the time.)

2. Egg-beater

As the gears of my old egg-beater rusted, I searched for a guaranteed non-rusting one. I settled for a very expensive type (well over £1) with the gears housed in a beautifully streamlined plastic sheath. The beating parts were plastic, too, attached to the centre core in an L-shape, thus forming a number of flat-bottomed "U's"—open at the top, which I

thought would be easy to clean. Alas, when opening the carton in which the beater was bought, I found the following instructions (*inter alia*):

"Do not immerse mixer in hot soapy water, as this will remove the lubricant in the gears.

"Do not wash the blades in BOILING WATER AND DETERGENTS. Use warm to hot water."

What this means is that you have to wash the beater separately. You can't leave this until washing-up time, because the cream or egg-white will set hard in the inside angles of the flat U and then is extremely difficult to remove. So you must wash the beater immediately after using it, which is usually not only an extremely rushed moment but also a very messy one—everything in the way. You can't hold it straight under the sink-heater, because that would be too hot; you can't lay it in the sink, because water would get into the oiled and carefully housed gears; you have to find a tall jug (so it doesn't tip over with the weight of the handle and gears), fill it with lukewarm water and, if possible, make this a bit soapy—a tall order if you've standardised on detergents. Then you can let it stand around until after things are cleared away, I guess, and then let it drip dry (at least I do, finding it very hard to get into the various struts and right angles to dry them).

Having been so expensive, I keep the thing in use, but loathe it. I must confess it does *whip* well!

Ah, well, as my grandfather used to say: "The first time you buy a horse it's sure to be lame. The second time you'll watch out . . . and buy one that's blind!" He never said what happens the third time. I often wonder.

Sincerely,

F. LAWRENCE,

Kirribilli.

CONSUMER RESEARCH IN SWEDEN

The English visitor to Sweden sighs enviously at the elegance of even the simplest Swedish home. When he knows Sweden a little better, he realises that it is because so much care goes into the practical side of design that the effect of ease and elegance is created and this is typical of a country whose slogan is 'More beautiful things for everyday use'.

In this the Swedish Institute for Consumer Research has played a redoubtable part. Everywhere you will see saucepans or cutlery, cooking stoves or children's clothes which have been influenced by recommendations from the Institute.

The Swedish way of life takes much more control for granted; so it was perhaps surprising that the original Swedish Institute for Consumer Research was an unofficial body, set up by the women's organizations during the war: it was not so surprising that the State took it over, early in 1957. Sweden is a large country, but the population is only $7\frac{1}{2}$ million odd: the Institute's budget of £50,000 or so was impossible to finance unofficially. The State had always regarded its work as important and always supported it.

Like Consumers Union, Sweden's Institute makes comparative tests of different makes of, say, vacuum cleaners or electric mixers. Brand-names are given in the published reports, praising the good or blaming the bad.

The Swedes, unlike Consumers Union, do not merely assess goods already on the market. If none of the existing ones are really first-class, the Institute goes on to say what *should* be made to meet the needs of the consumers. One very thorough enquiry which took a number of years was the 'Swedish Kitchen'. The institute's experts observed housewives at work just as a factory manager studies his manufacturing process, noting every movement in detail. Layout of cookers, sinks and cupboards and height of working surfaces, were changed around and examined until the best possible arrangement was found.

The institute then urged that kitchen planning should be done with even more care than the other rooms. After all, the housewife spends about one third of her working time on cooking

alone, and much of the rest of her time is also spent in the kitchen, which is often playroom and dining-room as well. Women's Institutes in Britain have recently reported¹ how often kitchens are too small and the Swedes would certainly agree that this was so in their country before the Institute began to influence what is done. These suggestions, for instance, ring a bell with many a tired English housewife:

Sinks should be at a height of at least $33\frac{1}{4}$ inches from the floor. Sinks too low cause more unnecessary fatigue than almost any other fault in kitchen design.

One working-surface should be low enough for housewives to sit down at for as much of their work as possible (e.g., ironing).

Every kitchen should have a ventilated larder as well as a refrigerator.

A number of the Institute's recommendations are now adopted as official standards for built-in kitchen fittings and for a wide range of manufactured equipment.

In Britain the *Council of Scientific Management in the Home* does similar work and has, in conjunction with the Building Research Centre, compiled a work-saving kitchen. But over here this work is hampered by lack of funds. Unlike the Swedes, we do not realise the need to help the housewives in their vital work.

The scope of the Institute covers all articles or foods used in the home. But the main difference between the Institute's work and that of the British and American consumer organisations is that the Swedish reports are meant primarily for the expert. They reach the ordinary man and women in various ways in Sweden, as for instance through the advisory service of 'home-consultants'—experts who are retained by many local authorities to help young couples in setting up their homes; and through teachers and educational organisations.

The institute also publishes popular pamphlets which are sold in the ordinary way; and a fortnightly press-release, dealing with current problems, keeps people in touch with the Institute's work.

(1) *Our Village*, National Federation of Women's Institutes, 1956.

This article is reprinted from "*Which?*" (Autumn, 1957), the magazine of the Consumers' Association Ltd., of London.



The Background

People put on weight if the food they eat provides more energy than they use up. The excess energy of the food is stored as excess fat. This fat will be lost, if they do more physical work; or if they eat less; or, of course, if they do more work *and* eat less. Many people nowadays are increasingly sedentary. It is important that they become more active. In addition, overweight people can reduce their weight by reducing their food intake.

The constituents of food which supply energy are *protein*, *fat* and *carbohydrate*. One can reduce the intake of energy by reducing any one of these. Let us consider them in order.

Protein is needed for making good the constant wear and tear of the body tissues. It is therefore unwise to reduce protein.

Fat helps to satisfy the appetite, so that cutting down fat often leads to hunger, discomfort and general irritability. Thus, although it is quite possible to lose weight by reducing protein or fat, and in particular many people manage quite well with low-fat diets, there are many reasons why this is not generally advisable.

Carbohydrate, then, remains as the best food component to reduce. It is, in fact, found by experience that a drastic control of the consumption of carbohydrate-rich foods is, by itself, an adequate way of reducing the total intake of food. One of the many advantages of carbohydrate restriction is that it is not too difficult to learn to eat less bread, pastries, cakes, potatoes, sugar and sweets. In this way, one undergoes a re-education towards sensible eating, which eventually becomes an unconscious new pattern.

The corollary of carbohydrate restriction is that there need be no voluntary control of the consumption of fat and protein. This is because it is difficult to eat excessive amounts of protein, and especially of fat. Thus, carbohydrate-free foods like fish, meat, eggs, cheese, butter and green vegetables may be eaten without restriction, and supply all the body's needs of essential protein, vitamins and mineral elements.

The foregoing, of course, is not meant as a guide to slimming. It is merely an indication of the principles of slimming against which one can judge the possible efficacy of slimming 'cures'. (Guidance on how to slim may be gained from the publications listed at the end of this report.)

The Cures

Drugs which Increase Energy Output

The normal way of dissipating the energy content of one's food is by bodily activity. It is, however, also possible to speed up the general rate of 'burning' food (metabolism) by drugs such as preparations of thyroid glands. These should only be taken by those very few people who are short of thyroid. The effects of thyroid on normal people are quite unpleasant. There are other drugs which have a similar action, but are even more dangerous. Fortunately, their unrestricted sale is forbidden in this country.

Substances which Decrease Appetite

Since, in a general way, it is true that overweight comes from over-eating, it seems logical to use preparations which decrease appetite. However, overweight people are often eating the wrong kinds of food, as well as too much. A general reduction in food intake might then well mean a dangerously low intake of foods providing essential substances

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like protein and vitamins. It follows that appetite-decreasing substances should only be taken in conjunction with a sensible carbohydrate-restricted diet.

Dexamphetamine (*e.g.*, *Dexedrine*) and *Preludin* are two common appetite-decreasing substances. Both cause undesirable side effects in some people. They should never be taken without the advice of a doctor.

Other substances which decrease appetite are methyl-cellulose and other similar derivatives of cellulose. These are not really drugs in the sense in which *Dexedrine* and *Preludin* are drugs, for their chief action is to swell in the alimentary canal and give a feeling of fullness. In constipated people, they may also act as very mild laxatives. Some products, such as *Slimso*, which can be bought in the form of chocolates or marmalade, and *Bisks*, contain such small quantities of either cellulose derivatives or other swelling substances that it is to be doubted whether they have any effect in decreasing the appetite. In addition, both contain a high proportion of carbohydrate. Both also give some dietary instruction.

Formula 21 gives a reasonable dose of methyl-cellulose and is sold together with careful and sound dietary instructions. The manufacturers make no claim that their preparation can, in itself, reduce weight. It is to be used only as a temporary aid in keeping to a sensible diet.

There are various *Swedish milk* diets—so-called although they are preparations, not diets in the normal English sense—some of which act on the same principle of providing a ‘stomach-filler’ to reduce appetite. The basis of these diets is, roughly, that one alternates more or less normal eating days with Swedish milk days. On these diet days, one takes three or four glasses of milk, thickened with the preparation. The chief and, medically speaking, most telling objection to these diets is twofold. The first is that they may result in an inadequate intake of the dietary essentials and so may lead to ill-health. The second is that they do not lead to a dietary re-education towards an improved normal eating pattern.

Slimming Pills

Some chemists sell ‘slimming pills’ which do not fall into the category either of metabolic stimulants or of appetite reducers. These pills usually contain a mild laxative such as cascara or aloes. We do not have to waste time—or money—on these,

for their is no known relationship between constipation and overweight.

Substitute Foods

For the reasons given, we have accepted that the main objective in a slimming diet is to reduce the intake of carbohydrate. On this basis, saccharin and its derivatives, such as *Saxin*, are sensible substitutes for sugar, for they provide no carbohydrate. On the other hand, glucose or brown sugar or treacle are not sensible sugar substitutes. In the first place, their sweetness, like that of sugar, depends on their content of carbohydrate. In the second place, glucose is, in fact, less sweet than sugar, so the same degree of sweetness means an intake of more carbohydrate. The same comments apply to sorbitol which is rapidly converted to carbohydrate in the body.

Bread substitutes can be judged by their content of carbohydrate. These preparations have a varying amount of water in them, but their hunger-satisfying qualities are independent of how moist or dry they are. For this reason, one has to compare these preparations with one another, and with bread, without reference to their varying amounts of moisture. We then find that such products as *Ryvita*, and as *Vita-Weat*, as well as toast and water biscuits, have all about the same amount of carbohydrate as bread, weight for weight. There is no reason, therefore, to suppose that they are of any special benefit in a slimming diet.

Procea Slimming Bread has a slightly smaller amount of carbohydrate than is found in ordinary bread. But it is claimed that the slimming bread is effective because, being blown up with more air, it gives a slice which, size for size, contains less carbohydrate than bread. This argument would be acceptable if an independently-controlled test showed that people eating it would not compensate for the lack of bulk by eating in fact more, or bigger, slices.

Starch-reduced rolls (*Energen*, *Figgerrolls*, *Granose*) come into a different category. Here a large proportion of the starch, *i.e.*, carbohydrate, is removed from the flour, so that the resulting rolls have a much lower content of starch and a much higher content of protein than ordinary bread. The proportion of starch on the basis of dry weight is 50 per cent or less for the starch-reduced rolls compared with about 70 per cent for *Procea* slimming bread, 80 per cent for *Ryvita* and *Vita-Weat*, and 82 per cent for ordinary bread.

Other Foods

From what has been said about the principles of slimming diets, it is clear that no food taken *in addition* to an ordinary diet can have any effect in weight reduction. The commonest fallacy of this sort concerns lemon juice, which for some reason is believed to help one to slim. It might perhaps do so if it reduced the appetite, but this it does not do.

External Slimming Treatment

In this category, we include Turkish baths and plastic suits, massage creams, bath salts, and special corsets. None of these has a slimming effect. Corsets may change one's shape, but do not result in weight loss. Turkish baths and plastic suits result in a loss of weight because of sweating, but the moisture is soon replaced when one drinks normally. Massage cannot effect weight reduction, because it does not help in the burning up of body fats. There is no cream which has been shown to effect reduction in weight, nor is there any reason to suppose that any cream could in any way remove fat. Neither massage nor creams nor anything else—except surgery!—can remove local fat.

An analysis of a sample of *Nu-Slim*, one of the slimming bath salts, showed that it contained

	per cent
Sodium carbonate (washing soda)	60
Exsiccated sodium sulphate (Glauber salts)	40
together with a trace of magnesium salts.	

The only effect of the salts is to soften the water. They will not produce weight-reduction any greater than that produced by water-loss from the body in a hot bath.

The dietary instructions alone might possibly produce some weight loss but are not specific enough to be useful.

As for *slimming creams*, we have analysed the preparation called *Reductor External Slimming Treatment*. This comes as an emulsion and as a powder, pH9. The powder pH9 was analysed and found to contain approximately.

24 per cent of sodium salt of sulphonated higher fatty alcohols.

76 per cent of sodium bicarbonate with traces of other substances.

Since this is mainly a detergent, it will only remove dirt and superficial fatty material. The emulsion was analysed and found to contain :

	per cent
Water	91
Total solids	9

The solids consisted of fat soluble material mainly composed of unsaturated vegetable oils and fatty acids, with a small amount of emulsifying agent of the polyoxyethylene glycol ester type. It seems only to act as a lubricant for rubbing the part of the body to be reduced.

The instructions for this treatment also suggest restriction of drinking at mealtimes and a reduced intake of sweet foods. (As far as drinking is concerned, it makes no difference whether you do this at or between meals.) These instructions are clearly inadequate for proper weight-reduction, and, in any case, are given only secondary importance compared with the local applications.

General

If people would accept the fact that excess fat comes from an intake of food in excess of body requirements they would be better equipped to judge the claims for slimming preparations. The view that eating sensibly will lead to weakness and lack of energy, is simply not true. Sensible advice about diet can nowadays be found in such publications as *Family Doctor*; *This Slimming Business*, by Professor John Yudkin, which gives the carbohydrate units for a variety of foods; *Slim Safely*, by Dr. Clyde (published by the British Medical Association); and the B.B.C. Television leaflet *Slim for Health* (obtainable from the Television Centre).

An Invitation

This report represents authoritative, current scientific and medical opinion. If, nevertheless, the manufacturers of the preparations described as NOT RECOMMENDED in the following list are prepared to carry out tests in conformity with accepted scientific practice and under the supervision of mutually agreed independent experts, CA will gladly publish the results in *Which?*

Until they do so, CA's conclusions from the foregoing report are as follows :

Summary*

		Price	
		£	s. d.
1. TO BE TAKEN ONLY WITH THE ADVICE OF A DOCTOR, AND IN CONJUNCTION WITH A SENSIBLE REDUCING DIET			
A. <i>Thyroid gland preparations</i>	which stimulate metabolism but may have undesirable effects		
B. <i>Dexedrine</i>	(Sold on doctor's prescription only)		
	<i>Preludin</i>		
	These decrease the appetite		
2. NOT RECOMMENDED AS SLIMMING PREPARATIONS			
A. <i>Swedish Milk Diets</i>	because they may lead to unbalanced diet and, in any case, will not lead to dietary re-education		
	<i>Larson's</i> 3 oz. packet	7	6
	<i>Bisk-o-Lait</i> 1 oz. tin	4	6
	<i>Carragan</i> 2 oz.	10	11
	4 oz.	19	0
B. <i>Slimso</i>	Box of chocolates	8	11
	Jar of marmalade	1	9
C. <i>Bisks</i>		2	10
		4	9
D. <i>Slimming Pills</i> , the active principle of which is a laxative			
E. <i>Procea Slimming Loaf</i>	each	1	0
	<i>Ryvita</i> per packet	1	1
	<i>Vita-Weat</i> per small packet	1	2
	because per oz. of dry weight, they contain about as much carbohydrate as bread		
F. <i>Lemon Juice</i>	because lemon juice has no known effect on weight-reduction		
G. <i>Rallie Belt</i> (standard model)		10	15 0
	<i>Reductor External Reducing Treatment</i>	2	7 0
	<i>Nu-Slim Bath Treatment Course</i>	1	0 0
	<i>Stephanie Bowman Slimming Garments</i>		
	13 garments ranging from sweat suit to anklets	3	3 0
		8	6
3. ACCEPTED AS SAFE AND EFFECTIVE SLIMMING AIDS AND PREPARATIONS			
	<i>Formula 21</i> 3 weeks' supply	1	1 0
	<i>Energen</i> 10 rolls	1	2
	30 rolls	2	6
	<i>Granose</i> 30 rolls	2	6
	<i>Figgerrolls</i> 10 rolls	1	2
	30 rolls	2	6
	Standard Saccharin 100 tablets	6	
	and its derivatives such as		
	<i>Saxin</i> 100 tablets	1	6
	<i>Sweetex</i> 100 tablets	1	3
	<i>Biskoids</i> 100 tablets	1	6

*Editor's note: The prices are those in the U.K. in £Stg. and the goods referred to are U.K. products and should not be confused with products marketed in Australia.

THE INDEPENDENT CONSUMERS' ORGANIZATIONS

As far as we can tell there are, in addition to ACA, only three consumers' testing organizations in existence which are not connected with trade interests or government authorities. Two of the three, including the oldest, are in the U.S.A. The other is the Consumers' Association Ltd., of England.

Consumers' Research Incorporated (CR) was founded in the U.S.A. in 1929 and expanded under the stimulus of the depression. By 1935 its *Consumers' Research Bulletin* had attained a circulation of 55,000. In that year, as a consequence of a labour dispute, a splinter group of officers and members left CR to establish a rival testing body, the Consumers' Union (CU). *The Consumer Reports*, published by CU, now have a circulation of about 1,000,000 while the circulation of CR's *Bulletin* probably is somewhat less than 200,000. Both these American organizations are very active and enjoy a level of income which enables them to engage in large-scale testing. For example, both of them, *each year*, test practically all the makes and types of cars produced in the U.S.A. as well as a number imported from England and Europe. To test the vehicles they must purchase them. The annual income of CU passed \$2,500,000 in 1951 and probably is now considerably larger.

ACA has profited from the American organizations through having studied their publications, through having read detailed reports of studies which have been made of them by academic workers, and through having corresponded with them. On the back cover of this journal the Consumers' Union's *Midyear Buying Guide* for 1959 is offered to ACA members at a considerably reduced price.

The Consumers' Association Ltd. (CA), established in England in 1956, is at an earlier stage in its development but has grown very rapidly, now having 160,000 members. For an annual subscription of £1 a member of CA receives the monthly publication *Which?* and our own journal is in some respects patterned on that publication.

Studies of the American organizations, CR and CU, indicate that their publications reach people controlling over 6% of the total consumer spending of the U.S.A. In 1953, 6% meant about \$15,000,000,000.



HOW TO BUY AND HANDLE FROZEN FOODS

Quick-frozen foods are now an established feature of the Australian food market. The range available includes vegetables, fruits, meats, poultry, fish, baked goods and pre-cooked meats. Frozen foods are very convenient to use and have been accepted as a permanent item among the food purchases of many families. However, there are still many people who have not made their acquaintance. Therefore, it may be helpful to offer a few suggestions on points which should be observed when buying these products.

Informed purchasing of frozen foods requires some understanding of the process by which they are prepared and the distribution system through which they pass before reaching the consumer.

The preservation of foods depends on preventing or controlling microbial and chemical changes, which are the main causes of food spoilage. In canned foods this is achieved by high temperature sterilization and hermetic sealing in tinplate or glass containers to prevent recontamination. Dehydration preserves foods by reducing their moisture content below the level necessary for bacterial growth. Freezing preservation depends on the fact that chemical

reactions and microbial growth both slow down if the temperature is reduced. If the temperature is lowered sufficiently microbial growth ceases and chemical reactions become extremely slow.

Freezing is an excellent method for preserving most foods, and, with few exceptions, it enables their fresh characteristics to be retained better than any other method of preservation. The maximum retention of fresh quality is achieved by freezing very rapidly, and this explains the use of the term "quick-frozen foods". The virtue of rapid freezing results mainly from the very limited opportunity it provides for the food to lose quality before it reaches a safe temperature. Quick-freezing factories use temperatures as low as minus 40 deg. F. (this is equivalent to 72 degrees of frost) to achieve this rapid freezing.

Much research and many years of experience have shown that frozen foods must be kept continuously at a temperature not exceeding 0 deg. F. to have a storage life suitable for commercial purposes. Storage at this temperature enables most fruits and vegetables to be kept satisfactorily for twelve months, thus providing year-round availability. Other products, such as baked goods and fish, may have a shorter life than this at 0 deg. F., but since they are not seasonal in availability, it is unnecessary to store

This article was prepared by an expert from the Division of Food Preservation and Transport of C.S.I.R.O. to whom ACA expresses its appreciation.

them for long periods. The storage life at 0 deg. F. of a range of frozen foods is shown in the Table. This life is extended by using lower temperatures, but this is more expensive and is only justified in special cases.

**Approximate Storage Life of Frozen Foods
at 0 deg. F.**

<i>Food</i>	<i>Months at 0 deg. F.*</i>
Berry fruits	12
Peaches	12
Beans	12
Broccoli	12
Brussels sprouts	12
Carrots	12
Cauliflower	12
Corn (on the cob)	9
Corn (whole kernel)	12
Mushrooms	9
Peas	12
Mixed vegetables	9-12
Beef (other than minced)	12
Beef (minced)	8
Veal	9
Lamb	12
Pork	6
Ham	6
Bacon	3
Poultry	6
White fish	6
Lobsters and crabs	2
Prawns	6
Oysters	3
Scallops	3
Bread and bread rolls	3
Fruit cake	12
Cake (other than fruit)	6
Fruit pies	12
Potatoes (French fried)	6
Sandwiches	2

*Some meats, fruits and vegetables may keep longer than 12 months at 0 deg. F., but for most purposes this is not economic.

The initial quality of frozen foods is the responsibility of the processor. Freezing does not improve the quality of food and the production of a high-quality product is only possible when choice-quality raw material is used. The processor must therefore be selective in buying raw material and must process it quickly under hygienic conditions. After it has been packed and frozen it must be stored at a temperature not exceeding 0 deg. F.

The distribution of frozen foods from the processor to the consumer usually involves an initial transport by ship, rail or road to a distributor's refrigerated warehouse. From this depot it is later delivered by road transport to the retailer, who stores it in a frozen food retail cabinet for sale to the ultimate consumer. Throughout the whole of this distribution the temperature of the food should not exceed 0 deg. F. if the consumer is to be supplied with frozen foods of the highest quality.

If the temperature of frozen foods rises above 0 deg. F. its quality will be adversely affected. The extent of deterioration will depend on the temperature to which it rises and the length of time over which this temperature exists. This matter is discussed in more detail later.

It will be clear from the foregoing comments that the quality of frozen foods, assuming they are of good quality when prepared, is very much a question of storage temperature. With this knowledge it is possible for the consumer to exercise some discrimination when purchasing these products.

Points to Observe when Buying Frozen Foods

Importance of Brands

Some manufacturers devote more attention to quality than others. Products bearing their brands are those more likely to be of good quality when purchased from the retailer. However, brand is indicative only of initial quality, and this may be jeopardised by neglect of proper storage temperatures after the food leaves the processor.

The Retail Shop

The proper methods for keeping and handling frozen foods in retail shops are well established and should be familiar to all retailers. In deciding whether a particular shop is a satisfactory one at which to purchase frozen foods it is useful to notice the methods practised in the shop. the following points are worth noting:

- (a) Are only good-quality brands stocked?
- (b) Are supplies to the shop delivered in properly refrigerated delivery vehicles? If they arrive in the back of a utility or other non-insulated vehicle it can be assumed that neither the distributor nor the retailer is greatly concerned about quality.
- (c) When deliveries are made—are the cartons unpacked immediately into the frozen food cabinet? Leaving frozen foods exposed in an unrefrigerated space is very poor practice.
- (d) When new supplies are placed in the retail cabinet, are they always put below existing stock? Unless the stock is always presented to the customer in the order in which it is received, it is certain that, sooner or later, some unfortunate client will receive an "antique" which may have been in the cabinet for years.

- (e) All frozen food cabinets should be equipped with an easily-read thermometer so that both the retailer and the customer can readily check the cabinet temperature. Unfortunately very few cabinets in Australia are equipped with a thermometer, but it is hoped this deficiency will be remedied in units supplied in future.
- (f) Are frozen foods in the cabinet always kept below the "Fill Line"? Foods stored above this line cannot be kept at the right temperature.
- (g) Is the cabinet always neat and tidy, properly defrosted and free from damaged packets?
- (h) Are frozen foods ever displayed outside the cabinet, *e.g.*, in unrefrigerated show cases or windows? Any retailer who does so is guilty of serious maltreatment of the food and the practice may give rise to food poisoning.
- (i) Does the shop re-pack large-size packs of loose frozen foods, *e.g.*, peas, in unbranded polythene or paper bags? This practice should be viewed with grave concern. The customer should always demand originally packaged and branded foods.

If observation in retail shops shows that these practices are not satisfactory, patronage should be transferred to a retailer who follows recommended methods.

It should always be remembered that the retailer depends on his clients for knowledge of the acceptability of the items he sells. Therefore it is important to let the retailer know whether the products he is selling are satisfactory. If they are not, the retailer can pass complaints on to the distributor or, if necessary, change to another distributor. By this means the retailer can stock only acceptable types and brands.

Appearance of Frozen Foods

Frozen foods which show any signs of having thawed should never be purchased, but it should be remembered that merely being in a hard-frozen condition does not ensure that they have always been kept at the proper temperature. If cartons of frozen foods are badly frosted on the outside or between the packet and the overwrap, it may be assumed that they have been subjected to adverse temperatures or stored for an excessive time. With transparent plastic bags excessive frost in the bags is indicative of

the same defect. However, small amounts of frost inside or outside the containers should not be regarded as objectionable.

With materials packed in transparent containers colour is a useful index of quality. Poorly processed or stored products frequently show brown or grey discoloration. Such packs should be avoided.

How the Housewife Should Treat Frozen Foods

When the processor, distributor and retailer have all efficiently discharged their responsibilities and provided a high-quality frozen food, serious loss of quality can still occur if the housewife mishandles them. However, provided the following simple suggestions are adopted there is little risk of deterioration between purchase and consumption.

1. Frozen foods should be replaced under refrigeration as soon as possible after purchase, unless they are to be used immediately. In most households the available storage will be the ice-cube compartment of a refrigerator, the freezing compartment, or a separate deep-freeze unit. Frozen foods placed in the ice-compartment may be kept for a few days, while those put in the freezing compartment will keep for two to three months, provided they are in good condition when purchased. If a deep-freeze unit is used the storage periods shown in the table are applicable, with due allowance for the probable age of the product when purchased.

2. Frozen foods should always be the last items purchased on the shopping excursion. They should be placed in an insulated bag, a double wall paper bag or several layers of wrapping paper.

3. It is good practice never to re-freeze goods which have been thawed. It is true that this can be done with some foods under some conditions without introducing a health hazard, but, since the domestic consumer is not always in a position to assess these factors, the practice is best avoided. In any case, even though no health hazard arises, there is always a serious loss of quality.

4. Many frozen foods, *e.g.*, vegetables, can be cooked without thawing, and this is recommended. Fruits, which are not normally cooked, may be thawed at room temperature or in running cold water. They should be used as soon as possible after thawing or preferably while there is a very small amount of ice still present. Large

items, such as turkeys, poultry, fish or roasts are best thawed overnight in a refrigerator. This ensures that the outside portions, which thaw first, are kept cold until the centre is thawed.

5. If it is desired to carry frozen foods for picnics or camping it is advisable to pack them in an insulated container with dry ice. Provided the dry ice is maintained the food will remain at a very low temperature and no deterioration will occur. Unfortunately dry ice is not widely available in Australia, so this method has definite limitations.

6. Unfortunately many people believe that provided foods are hard frozen there is nothing to worry about. This is not true. Most foods freeze at temperatures between 28 deg. F. and 31 deg. F. Water freezes at 32 deg. F. Obviously the food is frozen solid at temperatures greatly in excess of the recommended storage temperature of 0 deg. F. The effect of temperature on storage life is most marked. At 0 deg. F. the storage periods shown in the table are satisfactory. However, at 5 deg. F. these storage periods are reduced by half and at 10 deg. F. by three-quarters. For some foods the loss of

quality resulting from one or two days' exposure to temperatures of 25-30 deg. F. may be as great as that recurring in twelve months at 0 deg. F. Once frozen foods are damaged by exposure to temperatures above 0 deg. F. nothing can be done to restore the lost quality. Furthermore, such damage is cumulative. The effect of each and every exposure to high temperature is additive to the total effect of all previous exposures. Hence it will be clear that a hard-frozen condition cannot be taken to indicate satisfactory storage. This can only be determined by proper use of a thermometer to ensure that 0 deg. F. is maintained.

Conclusions

Frozen foods offer the housewife convenience and quality and they are becoming an important part of our food marketing. However, they will not tolerate abuse in regard to storage temperature, and to obtain the high nutritional and eating quality they offer, strict attention must be paid to proper storage and handling throughout the production, distribution and consumer chain. With this attention frozen foods make a welcome contribution to the household menus.

SHAMPOOS

Thick, glossy hair is beautiful, and posters and advertisements for shampoos are tempting. Why not try RICHARD HUDNUT Shampoo with Egg if it washes shimmering sunbeams right into your hair? or SILVIKRIN, if it's the only shampoo which makes your hair *really* healthy? Or BRISTOW'S LANOLIN if it makes Jill the centre of attraction at every party?

Suspecting the sad truth that a shampoo cannot, by its nature, be expected to feed hair, nurse it back to health, nor—on its own—bring romance to its user, CA set out to discover what it could about shampoos in real life.

Nature of the Hair

The hair shaft is dead tissue consisting, like the surface of the skin, of cells containing a protein called *keratin*.

All hair growth is at the root, where there are blood vessels, which supply nourishment. A *sebaceous gland* nearby secretes oily *sebum* which



spreads along the shaft, protecting the hair and keeping it glossy and manageable. Young people

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often have overactive sebaceous glands—with resulting greasy hair. Older people sometimes have underactive sebaceous glands—with resulting dry hair.

If hair is to look its best, it must be clean. It must grow thickly. It must be glossy. Although clean hair has a natural gloss, oil, whether produced by the sebaceous glands or applied as a dressing, can give it more. It must be manageable. The more moisture it has the easier it is to manage, for, when dry, the hairs tend to get charged with static electricity and fly apart when brushed. Oil or water on the hairs prevents this. Finally, it must be free of dandruff.

What can a shampoo do to contribute towards these desirable ends?

What is a Shampoo ?

To find out, CA first had survey analyses made of twenty-one of the most popular shampoos on the market. Their names and prices are given in the table on p. 154. Thirteen were liquids; three cream; four powder or leaf; and one, WHITE RAIN, was analysed in the three versions sold for oily, dry and normal hair. JOHNSON'S BABY SHAMPOO was included as the only one specially advertised for babies.

As you can see from the analysis, a great part of the liquids and creams is water. But the most important constituent is the detergent. This can be soap, but in hard water soap forms a scum which is difficult to rinse out of the hair. So almost all shampoos now contain the soapless detergents called *sulphated fatty alcohols*. They give a good lather even when they are used in hard water. A few contain *ammonium lauryl sulphate*, some have the modified version—*triethanolamine sulphated lauryl alcohol*, others *monoethanolamine sulphated lauryl alcohol*. *Sodium lauryl sulphate* is mainly used in powders and pastes because it is less soluble. Some shampoos may contain anionic detergents other than lauryl sulphate. The table shows them all calculated conventionally as hydrogen lauryl sulphate, to give an approximate measure of comparative detergency.

To ensure a lasting foam, most of the shampoos have 1-2 per cent *alkylolamide* and to make the liquid shampoos thick and prevent them from running down your neck and into your eyes, thickeners (soaps and triethanolamine sulphate) are added. *Pearling agents* (extracts of fish scales or a mixture of salts which give the shampoo—not the hair—a silky look) and *opaci-*

fiers (which make it look opaque and creamy) make the shampoos look more attractive. They have no known effect on the hair.

Apart from these ingredients there are various others, in small amounts, listed in the analyses under 'Other Constituents'.

Lanolin or *castor oil* rubbed into dry hair can substitute to some extent for sebum but it is difficult to see how such small amounts could have much effect in a shampoo. If the hair is to be clean, *all* the shampoo, oil included, should be rinsed away.

Beer, egg, champagne. Beer is used successfully as a setting lotion, but neither beer, nor egg, nor champagne have been shown to have any beneficial effect on the hair or scalp. And, even if they had, they would be washed away when the hair was rinsed, and would therefore have very little time to act.

Hexachlorophene is an antiseptic. *Alcohol*, included in some shampoos, may be for clarifying. *Soap* is added to some shampoos not only to add to their cleansing power, but for thickening.

EVAN WILLIAMS* is different from all the others in that it is based on soap, with alkaline builders added, as in soap powders, to increase the washing efficiency.

*Not the new EVAN WILLIAMS 'Hi-Glo' which came on the market too late to be analysed.

Conclusions from Analyses

From the analyses, it is clear that all the liquid and cream shampoos, since they were all based on very similar soapless detergents, would clean the hair effectively in hard or soft water.

All should leave the hair equally glossy and manageable and all should leave it equally healthy or unhealthy since none of the ingredients could influence the blood-supply of the hair's owner.

There was a difference that could affect oiliness or dryness of the hair between the three versions of WHITE RAIN. The ratio of synthetic detergent was lowest in the version for dry hair, highest in that for greasy hair. This was logical.

There were differences between these shampoos and some of the powder or leaf varieties. EVAN WILLIAMS, since it was like a soap powder, would not be as good as the others in hard water, and it was also alkaline. STABLOND was even more alkaline. STABLOND, VASELINE POWDER and WATER LILIES all had a high percentage of detergent.

Editor's Note:—

The goods referred to are U.K. products and the prices are in £Stg. They should not be confused with products marketed in Australia.

Survey Analysis	Size†	Price	Weight—oz.‡	Anionic detergent (calculated as hydrogen lauryl sulphate MW 226) %**	Soaps (calculated as fatty acids) %	Water and Volatiles (at 105°C) %	pH1% Solution	Other Constituents*	Price per oz. (pence)
Liquid		<i>s. d.</i>							
CRYSSELLA	Sachet	7	0.49	13.0	Not estimated	73.6	5.5		14.3
DRENE	Sachet	8	0.62	13.5	"	69.3	7.0	Alcohol 0.6%	12.9
	Small bottle	10½	0.57						18.4
	Medium bottle	1 5	0.97						17.5
	Large bottle	3 4	2.79						14.4
GLORIA	Sachet	8	0.54	8.9	"	86.4	6.0		14.8
	Bottle	2 0	2.52						9.5
RICHARD HUDNUT	Sachet	9	0.62	7.7	"	84.1	7.0	Egg 0.5%	14.5
	Small bottle	3 10	4.07						11.3
	Large bottle	5 9	8.38						8.2
LINC-O-LIN	Sachet	9½	0.44	12.7	6.2	77.0	8.0	Alcohol 0.3% corresponding to beer 10%, lanolin	21.6
	Double sachet	1 0	0.66						18.2
	Barrel	2 3	1.83						14.7
RICHE	Sachet	1 0	0.45	7.5	0.5	85.0	4.0	Alcohol 0.3% corresponding to champagne 2.3%, 1½% non-ionic matter	26.6
	Bottle	3 9	2.54						17.7
SEBBIX (medicated)	Sachet	9	0.30	15.5	Not estimated	65.8	6.0	1% hexachlorophene, medicaments (declared)	30.0
	Bottle	3 2	2.18						17.4
SILKSHEEN	Sachet	6	0.48	15.5	"	80.9	6.0		12.5
	Bottle	1 9	2.05						10.2
SILVIKRIN	Sachet	7	0.39	12.1	"	73.9	6.0	0.3% alcohol, small amount oily matter, 'Silvikrin' (declared)	18.0
	Small bottle	1 8	1.35						14.8
	Large bottle	3 3	3.37						11.6
SUNSILK	Sachet	9	0.58	11.6	"	82.2	6.0		15.5
	Tube	1 8	1.09						18.3
	Bottle	2 4	2.35						11.9
VASELINE	Sachet	7	0.43	12.1	"	72.3	6.0		16.3
	Small bottle	1 6	1.28						14.1
	Large bottle	3 3	4.10						9.5
VOSENE (medicated)	Sachet	7	0.34	17.0	"	81.4	5.5	Medicaments (declared)	20.6
	Small bottle	2 3	1.96						13.8
	Large bottle	4 5	5.57						9.5
WHITE RAIN	Sachet	9	0.48	13.3	"	60.6	6.5		18.8
For oily hair (pink)	Small bottle	2 6	1.74						17.2
For normal hair (white)	Sachet	9	0.42	12.1	"	64.8	6.5		21.4
For dry hair (blue)	Small bottle	2 6	1.70						17.6
	Sachet	9	0.46	8.9	5.0	64.6	7.0		19.6
	Small bottle	2 6	1.75						17.1
Cream									
BRISTOW'S	Sachet	9	0.38	18.7	Not estimated	77.7	5.5	Lanolin	23.7
	Tube	2 11	1.26						27.8
LUSTRE-CREME	Tube	1 9	0.25	17.0	8.5	68.3	9.0	Lanolin	36.0
	Medium tube	1 7	0.66						28.8
	Large tube	2 6	1.47						20.4
	Jar	3 4½	2.04						19.9
STEINER S.3	Sachet	1 0	0.50	12.0	9.0	72.9	9.0	Sodium chloride (common salt)	24.0
	Small jar	4 9	1.89						30.2
	Tube	5 3	2.96						21.3
	Large jar	8 6	3.86						26.4
Powder or Leaf									
STA-BLOND	Envelope	7½	0.42	32.2	Not estimated	18.6	10.0	Sodium sulphate carbonates, phosphates, trace of perborate	17.9
VASELINE	Envelope	5	0.18	47.2	"	5.5	5.5	4.6% phosphates, balance of sulphate and chloride	27.8
WATER LILIES	Packet of 6 leaves	1 3	0.35	39.5	"	16.0	4.5	41.4% paper	42.9
EVAN WILLIAMS	Henna sachet	6	0.54	—	27.0	19.8	9.0	Henna trace phosphate 3.5% sesquicarbonate 47%	11.1
JOHNSON'S BABY SHAMPOO	Sachet	9	0.45	3.1 plus 11.5% non-ionic	Not estimated	72.0	6.5	Additional inorganic and surface active matter up to 13%	20.0
	Bottle	3 5	3.43						12.0

*Thickening agents, foam stabilizers, pearling agents and opacifiers are not included in this table.

†Certain larger sizes are excluded here because CA found they were not so generally available.

‡Squeezed or poured out: because some remained in the container, manufacturers' stated contents may be slightly higher.

**Some shampoos may contain detergents other than lauryl sulphate and their equivalent amounts present may be higher than these figures (e.g. RICHE) which in effect give the relative detergent power of the anionic actually present.

Practical Tests

It is never certain that anything will behave in practice as it should in theory, so CA arranged

for practical tests on all the shampoos to be carried out in a school of hairdressing. Between them, the 21 shampoos were each used 100

times and the results reported on by the student hairdressers. They had to report on whether the hair looked clean and glossy; how easy it was to comb out when wet; how manageable it was when brushed out dry. If there was any dandruff, the students were asked to note any *immediate* improvement.

The reports showed that with every shampoo there was a certain proportion of *heads of hair* that gave poor results—either lack of gloss, or difficulty in combing out when wet or managing when dry. The difference between the *shampoos* was not significant. The amount of shampoo used was not controlled and on the whole too much was used. **Most people tend to use too much and remove not only dirt but all the natural oil, and this is the main reason for that 'can't do anything with it' complaint.** Many of the subjects with dandruff showed improvement immediately after the hair was washed, whatever the shampoo used.

Dandruff

Special claims to cure dandruff are made by some shampoos.

Dandruff is the name given to white scales which sometimes appear on the scalp, flake off on to clothes and are certainly undesirable. At one time it was thought to be an infection by a yeast-like organism. Now it is considered to be due to an excess of dead keratin on the surface of the scalp, to which some people are more liable than others. The belief that it is associated with premature baldness is unfounded. 'Medicated' shampoos are no more value in the treatment of dandruff than ordinary shampoos. The mechanical action of detergent and water is what removes the scales. People who suffer from dandruff should simply wash their hair more often than those who do not.

There is one substance, however, which, when incorporated into a shampoo, does give more lasting relief from dandruff. This is *selenium sulphide*. The selenium is rapidly taken up by the keratin, replacing some of the sulphur, and the scales become so much smaller that they are then less obvious and therefore less worrying. Selenium is a dangerous substance and should only be used in a shampoo until improvement is noticeable, then about every six weeks, ordinary shampoos being used in between. Scrub carefully under your nails after use. None of the popular brands investigated contained selenium.

Shampoos and the Eyes

Accidents will happen, and most people get shampoo in their eyes at some time or other. Soap, soapless detergents and additives such as alcohol will immediately irritate the eyes and make them water. But the shampoo is not sufficiently concentrated, nor does it as a rule remain in contact long enough with the eyeball to do serious damage. Experiments carried out with *concentrated* solutions of sulphated lauryl alcohols have not shown them to be very damaging. In general, anionic detergents are more irritating than non-ionic and JOHNSON'S BABY shampoo has therefore been made chiefly from non-ionic detergents. But it also contains a small amount of the anionic detergent which is probably included to give the thick lather which everyone associates with a good shampoo.

As with detergents used for laundering, there are people who become sensitized to certain dermatitis of the eyelids. But the number of such people is very small.

FINAL CONCLUSIONS

All the shampoos analysed were good at washing hair. All (except EVAN WILLIAMS, which was essentially a soap powder) were soapless detergents and therefore as effective in hard water as in soft. They had the advantage over soap, of not forming a scum in hard water, so making rain water, lemon rinses and so on, unnecessary.

None did any more than wash the hair. A shampoo cannot, by its nature, 'feed' the hair, nor make it healthy. An adequate diet and a good digestion will ensure that the hair gets all the 'food' it needs. None of those claiming extra qualities because of added lanolin, egg, beer, champagne, were found, in the practical tests, to have any better effect than those that did not.

VALUE FOR MONEY

Some people may buy a particular make of shampoo because they like its appearance, scent or packaging. CA's report does not take such factors into account.

For those who want to get the best value for money, CA recommends buying the largest possible size of any brand, and the use of small quantities. It is not possible to pick out the brand which gives the best value for money in terms of price per oz. of active ingredient because the composition of the shampoos varies so much that no exact quantitative comparison is possible.

HOW MUCH DO YOU REALLY SAVE?

ECONOMY SIZE

FAMILY SIZE

SUPER SIZE

KING SIZE

GIANT SIZE

MIGHTY SIZE



Generally we are all led to believe that we can save money by buying goods in the larger-sized packs. Certainly it is true that economies, usually small, can be achieved by buying, say, boxes of matches in packets of a dozen rather than singly. In such cases one would hardly expect to find otherwise since the shopper's mental arithmetic is equal to the task of assessing the advantage on the spot. But what of the cases where the quantity is not revealed by the manufacturer or is shown on the pack in small print which the shopper probably does not notice? Are the larger-sized packs in these cases really "economy" sizes? Not one housewife to whom ACA put this question had any idea. Therefore, in December last, we decided to put the matter to the test, at least for a few products.

ACA sent out several shoppers to buy various brands of three common commodities in all sizes of packs—breakfast foods, baked beans and soaps. The shoppers handed in their purchases and the goods were emptied from their wrappings or containers and weighed.

The three tables accompanying this article show you the results ACA obtained. They give first, the name of the goods, including the brand, and then the price actually paid. Where a nominal weight was shown on the pack by the manufacturer this is given next, first in ounces, and then converted into grams for convenience. Then is given the actual weight obtained, in grams.

In the second-last column you see the quantity obtained per penny spent. We hasten to point out, however, that the brand giving the greatest

quantity for your money is not necessarily the best value; the quality of the goods would also have to be considered to determine that, and in this report we are concerned only with quantity.

The last column in each table shows you the amount of money saved by buying the larger size as compared with the same (actual) quantity in smallest-sized packs.

Now, what can be said of these results?

Breakfast Foods (Table I).

First, it is very gratifying to see that in every instance the pack contained a greater weight of food than claimed by the manufacturer. Of course, foods of this sort can absorb moisture from the atmosphere and it might be thought that this is the explanation of the excess weight. The waxed-paper used inside, and in some cases outside, the cartons is never entirely impervious to atmospheric moisture. However, all the foods were crisp and apparently fresh when weighed, and we have no reason to attribute the excess weight to that cause. You may notice that in several cases more than an ounce more food was obtained than expected.

The saving in money varied very much from one product to another; 1/4d. was saved on the large packet of Weeties but only 4d. on the large size of Weet Bix. However, if you look at the second-last column of the table you will appreciate that these facts could easily be misinterpreted, since the considerable difference in saving is really a consequence of the relatively low quantity per penny obtained in the small

pack of Weeties. The purchase of the large size of Kellogg's Corn Flakes actually represented a loss of 3d. In regard to this, it must not be forgotten that more than the nominal weight was obtained and a closer look at the table shows

that the loss arose because the excess of weight in the smaller pack was rather greater than the excess in the larger pack. But the fact remains that, for this brand, the smaller size was the more economical buy.

Table I: Breakfast Foods

Make						Price*	Nominal Weight ozs.	Weight grams.	Actual Weight	Grams/1d.	Saving
Weet Bix	..	..	..	..	..	1/6½	12	340	374	20	4d.
						2/6½	24	680	700	23	
Weeties	..	..	..	..	..	1/6	8	226	256	14	1/4
						2/9	24	680	693	21	
Kellogg's Corn Flakes	..	..	..	..	..	1/6	8	226	260	14	3d. loss
						2/11½	16	454	467	13	
Rice Chex	..	..	..	..	..	1/11½	6	170	200	8½	1/1
						2/7½	12	340	377	12	
Kellogg's Rice Bubbles	..	..	..	..	..	2/-	8	226	230	9½	4½d.
						2/11½	12	340	384	11	
Vita Brits	..	..	..	..	..	1/6½	12	340	350	19	9½d.
						2/6½	24	680	754	25	

*Please note these purchases were made in December, 1959, in Sydney and there, at least, increases in these prices have since been introduced.

Baked Beans (Table 2)

In some instances the tins of this food contained less than the amount claimed by the manufacturer. The deficiency was most noticeable in the largest sizes of the Kia-Ora and IXL products, exceeding ½ oz. in both cases.

In every instance a saving was achieved with the larger-sized tins. This ranged from 1/4½d. for the largest size of IXL-brand to ½d. for the medium-size of P.M.U. You will notice from the second-last column of the table that the 1 lb.

sizes of all the brands contained approximately 19 grams of baked beans per penny spent. However, this fact is interesting rather than significant since one doesn't know how much of the contents of a tin is simply water or, more generally, how the different brands compared in quality.

Certainly, Table 2 tells us that, once a brand has been decided on, our baked beans are bought most economically in the largest size, *provided* we can use the whole of the contents.

Table II: Baked Beans

Make							Price	Weight (Grams)		Grams/1d.	Saving
								Nominal	Actual		
Kia-Ora	4-oz.	..	..	..	..	..	7d.	113.2	106.2	15.2	2d. 6½d.
	8-oz.	..	..	..	..	..	1/1½	226.4	231.9	17.1	
	16-oz.	..	..	..	..	..	1/10½	454.0	436.0	19.4	
IXL	4-oz.	..	..	..	..	..	9½d.	113.2	103.2	10.9	5½d. 1/4½
	8-oz.	..	..	..	..	..	1/2½	226.4	217.7	15.0	
	16-oz.	..	..	..	..	..	1/11½	454.0	434.2	18.5	
Heinz	4-oz.	..	..	..	..	..	10½d.	113.2	111.0	10.6	6½d. 1/7
	8-oz.	..	..	..	..	..	1/2½	226.4	220.8	15.2	
	16-oz.	..	..	..	..	..	1/11½	454.0	448.0	19.0	
P.M.U.	4-oz.	..	..	..	..	..	7d.	113.2	112.0	16.0	½d. 5d.
	8-oz.	..	..	..	..	..	1/1½	226.4	225.0	16.7	
	16-oz.	..	..	..	..	..	1/11	454.0	446.0	19.4	

Soaps (Table 3)

ACA purchased five brands of toilet soap, each in three sizes, and, out of sheer curiosity, also one brand of soap powder which was available in two sizes—Standard and MIGHTY.

The picture which unfolded here was in contrast with that presented above. Regardless of brand, size or place of purchase the weight of toilet soap obtained per penny spent was much the same—about 9 or 10 grams per penny. The saving with the larger sizes was insignificant in all cases except, perhaps, the Large-Family size of Lux.

Soap tablets present a problem we all have noticed: as the tablet gets smaller in use it finally reaches a size—like that provided by hotels—when it isn't much use at all. The thrifty squeeze these little wafers on top of a new tablet. However, even if you do not save when you buy the "super" size you can go further with it before this useless minimum is reached. But don't forget—the bigger the supply the more likely it is to be wasted!

You will see from the table that the shopper who bought the Mighty size of Rinso saved not a fraction of a penny as compared with the standard size. In this regard Rinso falls in with the soap tablets, and we conclude that with soaps the "economy" amounts to little more than a few bubbles one way or the other.



Incidentally, the shopper who bought ACA's baked beans had an interesting story to tell which has a moral for retailer and customer alike. The beans were bought in a chain-store self-service grocery in which the prices were shown on the display shelves. The cash-register operator relied on memory in tallying up the sale and in six cases out of a dozen her price did not agree with that on the shelves. It is very doubtful whether an employee should be expected to be a walking price list; probably a list of prices should be displayed at the paying point.

In this article ACA has reported on the savings (such as they are!) which can be achieved by buying large, and has given you details for different brands of three types of goods. There are many other sorts of goods which could be considered in the same way, and from time-to-time we shall bring you further information of this kind.

Table III: Soaps

<i>Make</i>									<i>Price</i>	<i>Weight Grams</i>	<i>Grams/1d.</i>	<i>Saving</i>
LUX:												
Small (Toilet)	..	..	..	..	..	..	..	..	9½d.	84.5	8.9	
Medium (Bath)	..	..	..	..	..	..	..	..	1/2	131.7	9.4	0.8d.
Large (Family)	..	..	..	..	..	..	..	..	1/7	187.0	9.8	2.0d.
LIFEBUOY:												
Small	..	..	..	..	..	..	..	..	9½d.	84.3	8.9	
Medium	..	..	..	..	..	..	..	..	1/2	131.6	9.4	0.8d.
Large	..	..	..	..	..	..	..	..	1/7	175.1	9.2	0.7d.
PROTEX:												
Small	..	..	..	..	..	..	..	..	1/1½	136.8	10.1	
Large	..	..	..	..	..	..	..	..	1/7	188.2	9.9	0.4d. Loss
CORONET:												
Small	..	..	..	..	..	..	..	..	9½d.	97.0	10.2	
Medium	..	..	..	..	..	..	..	..	1/2	141.0	10.1	0.4d. Loss
Large	..	..	..	..	..	..	..	..	1/7	192.0	10.1	0.4d. Loss
PALMOLIVE:												
Small (Toilet)	..	..	..	..	..	..	..	..	9½d.	95.0	10.0	
Medium (Bath)	..	..	..	..	..	..	..	..	1/2	144.0	10.3	0.4d.
Large (Superbath)	..	..	..	..	..	..	..	..	1/7	194.0	10.2	0.4d.
RINSO:												
Standard	..	..	..	..	..	..	..	..	2/1	460.0	18.4	
Mighty	..	..	..	..	..	..	..	..	5/11	1310.0	18.5	nil

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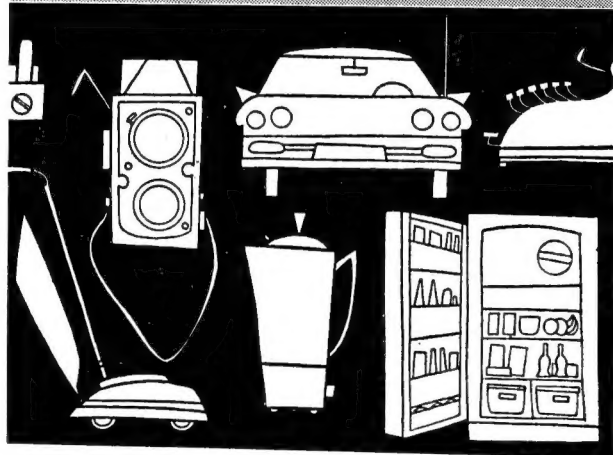
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